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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/115,229	07/14/98	SCHEELEN	A SLVAY-3741.0

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EXAMINER

DYE, R

ART UNIT	PAPER NUMBER
1772	17

DATE MAILED: 04/30/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/115,229

Applicant(s)
Schefflen et al.

Examiner
First Last

Art Unit
1234



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 12, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Continued Prosecution Application

1. The request filed on February 12, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/115,229 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 112

2. Claims 16,17 and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of “wherein talc is added in an amount effective to increase a creep resistance of said composition” and “the composition is characterized by creep resistance” is vague and unclear. Applicant’s specification at page 2, second full paragraph, discloses “*the present invention ...provides compositions which make possible the manufacture of shaped articles, such as pipes, for which the creep resistance is significantly improved without affecting the other mechanical properties of the of the shaped articles, such as the resistance to the slow propagation of cracks (stress cracking or ESCR)*”. Therefore, it appears that the recited “creep resistance” property is a property of the shaped article made from the composition, and not that of the composition itself. Clarification is requested.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9,15-17, and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (5,049,411).

Jenkins et al. teaches a high density polyethylene (HDPE) composition comprising from about 50 to about 95 weight percent of HDPE and from about 1 to about 30 weight percent of a filler which may be talc (Abstract). The term high density generally refers to densities in the range of about 0.94 to 0.965 g/cm³. The term polyethylene as used herein includes homopolymers of ethylene and copolymers of at least about 85 weight percent ethylene with up to about 15 weight percent of one or more C₃ to C₁₀ alpha-olefins, such as 1-butene, 1-hexene, etc. Preferably the copolymers include from about 0.1 to about 3 weight percent of the alpha-olefin comonomer (column 1, lines 56-66). The talc is employed as a filler in the composition. In particular when used with HDPE the talc is preferably in the form of particles of a size in the range of about 0.5 to 50 microns. The talc is employed in amounts ranging from about 1 to about 30 weight percent.

Jenkins et al. further teach shaping of the composition into an article such as a packaging material, or an envelope (column 1, lines 32-36). The composition is formed into a seamless tube by extrusion and then later formed into an envelope (column 2, line 50 to column 3, line 10).

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Since Jenkins et al. teaches that which appears to be identical to that recited in the present claims, with respect to HDPE, it is the Examiner's position that the recited melt flow would be inherent. The recited particle size distribution between 0.2 and 15 microns, and mean particle size between 1 and 5 microns would be well within the disclosed particle size range taught by Jenkins et al.

Since Jenkins et al. teach talc merely used as a filler, it would have been obvious to one having ordinary skill in the art to have used less filler if e.g. manufacturing costs were not an issue. Since Jenkins et al. teaches talc having a lower end range of 1%, the Examiner would like to note that only a very slight decrease in the weight % of talc would fall within the presently claimed range, i.e. .94 wt%, .95 wt%, etc.

The recited "talc is added in an amount effective to increase a creep resistance of said composition" and "wherein the composition is characterized by creep resistance (t), wherein t=creep resistance expressed in terms of time to fracture, measure according to ISO Standard 1167 (1996) at 20°C on a pipe having a diameter of 50 mm and a thickness of 3 mm and under a circumferential stress of 12.4", would be met by the polyethylene composition made obvious by Jenkins et al.

The added limitation "for manufacture of pipes and pipe couplings" only recites the intended use of the composition, and is given little patentable weight.

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5. Claims 1-17 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wooster et al. (5,631,069).

Wooster et al. teaches a polyethylene composition used to mold articles. The molded material is comprised of high molecular weight linear polyethylene and a substantially linear ethylene/ α -olefin interpolymers. The material has a density in the range of about 0.923 to about 0.95 g/cm³ and has excellent impact resistance (Abstract). The polyethylene material can be molded into articles, such as pipes, tubes, or molded parts (column 1, lines 23-31). The molded material can be made produced from blends of a) high molecular weight high density polyethylene (HDPE) and b) linear low density polyethylene (LLDPE), VLDPE, etc. (column 4, lines 1-11). Both HDPE and LLDPE are prepared in a similar manner where ethylene is copolymerized with an α -olefin such as butene or hexene (column 4, lines 47-62). Although not generally required the molded material can also contain additives to enhance antiblocking and coefficient of friction characteristics including talc (column 14, lines 13-29). The molded polyethylene material can be produced by known processes, for example by casting processes, compression molding, or preferably, by extrusion (column 13, lines 45-48). Although not expressly taught, it is the Examiner's position that the teaching of injection molding is a well known and conventional process for making pipes, and would have been an obvious method for making the disclosed articles.

Since Wooster et al. teaches that it is known to include additives, such as talc, in molded polyethylene compositions, it would have been obvious to one having ordinary skill in the art to

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have included the talc in an effective amount to have imparted antiblocking and coefficient of friction characteristics. The determination of such amount of talc to impart such properties is deemed to be routine optimization and well within the level of skill of the ordinary artisan. Furthermore, it would have been obvious to one having ordinary skill in the art to have used more or less of the talc additive if manufacturing costs were of an issue.

Although Wooster et al. specifically fails to teach the molding of pipe couplings from the polyethylene composition, pipe couplings are *prima facie* obvious over the teaching of pipe. Pipes and couplings are designed to work in the same system, and a pipe may well be used as a coupling, i.e. if it is used as an intermediate between two pipes it has "coupled" the two pipes.

Since Wooster et al. teaches that which appears to be identical to that recited in the present claims, with respect to the presently claimed polyethylene, it is the Examiner's position that the recited melt flow would be inherent. The recited particle size distribution between 0.2

The recited "talc is added in an amount effective to increase a creep resistance of said composition" and "wherein the composition is characterized by creep resistance (t), wherein t=creep resistance expressed in terms of time to fracture, measure according to ISO Standard 1167 (1996) at 20°C on a pipe having a diameter of 50 mm and a thickness of 3 mm and under a circumferential stress of 12.4" would be met by the polyethylene composition made obvious by Wooster et al.

The added limitation "for manufacture of pipes and pipe couplings" only recites the intended use of the composition, and is given little patentable weight.

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The added limitations recited in claims 12-14 continue to be met by the teachings of Wooster.

Allowable Subject Matter

6. The Examiner would be willing to consider for allowance a claim which resembles that which is recited in claim 4 (including the limitations of claim 1) which *positively* recites "pipes or pipe couplings".

The prior art of record fails to teach or suggest a pipe or pipe coupling characterized in that the polyethylene exhibits a standard density, measured at 23°C according to ASTM Standard D 972, of greater than 940 kg/m³ and characterized in that the amount of talc is between 0.05 and 0.25 parts per 100 parts by weight of polyethylene to provide creep resistance.

Response to Arguments

7. Applicant's arguments filed February 12, 2001 have been fully considered but they are not persuasive. The Examiner's arguments from the previous Office action appear to apply to Applicant's arguments and have been repeated for convenience.

In response to Applicant's arguments regarding the Jenkins et al. reference, it is the Examiner's position that since Jenkins teaches talc merely as a filler, it would have been obvious to one having ordinary skill in the art to have varied the amount of filler used. Although Applicant argues that Jenkins et al. comprises at least 1.05 part of talc per 100 parts by weight polyethylene, it is the Examiner's position that the recited "an amount of less than 1 part per 100

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parts by weight of polyethylene” would overlap with the teaching of about 1-30 weight percent of a filler of talc as taught by Jenkins et al. The filler content taught by Jenkins et al. appears to be based on 100% of the polyethylene/polyisobutylene composition. Therefore, it is noted that the polyethylene or polyethylene-based composition could include additional components such as the polyisobutylene taught by Jenkins et al. Therefore, it is the Examiner’s position that the polyethylene in which the weight percent of talc is based on could include additional components since the Examiner interprets the recited “polyethylene” to include additional components or that which is the same as “comprising” language. Furthermore, it is the Examiner’s position that the weight percent talc based on polyethylene by itself or polyethylene having additional components in the composition is met by and would slight overlap in either instance with that which is taught by Jenkins et al.

Nevertheless, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that choosing the overlapping portion, of the range taught in the prior art and the range claimed by the applicant, has been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549.

It has been held that a range of “more than 5%” would overlap a disclosure of 1-5%, *In re Wertheim*, 541 F. d. 257, 191 USPQ (CCPA 1976), *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d. 1934 (Fed. Cir. 1990).

There does not appear to be any distinction in the properties of the article the numbers are so close, they appear to overlap. In any event these values would be minor obvious variations and

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expected to have the same properties. *See Titanium Metals Corporation vs Banner*, 778 F. d. 775, 227 USPQ 773 (Fed. Cir. 1985).

With respect to Applicant's arguments regarding the Wooster et al. reference, the Examiner maintains the position that since Wooster et al. teaches that it is known to include additives, such as talc, in molded polyethylene compositions, it would have been obvious to one having ordinary skill in the art to have included the talc in an effective amount to have imparted antiblocking and coefficient of friction characteristics. The determination of such amount of talc to impart such properties is deemed to be routine optimization and well within the level of skill of the ordinary artisan. Accordingly, the properties of the polyethylene composition as taught by Wooster et al. would have been recognized as result-effective variables by one of ordinary skill in the art, depending on the antiblocking and coefficient of friction characteristics desired. Optimization of such properties would have been well within the ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 ISPQ 215, 219 (CCPA 1980). Furthermore, the obvious product taught by Wooster et al. and Jenkins et al. would meet the presently recited "wherein talc is added in an amount effective to increase a creep resistance of said composition (claims 16-17).

Applicant's specification at page 2, second full paragraph, discloses:

the present invention ...provides compositions which make possible the manufacture of shaped articles, such as pipes, for which the creep resistance is significantly improved without affecting the other mechanical properties of the of the shaped articles, such as the resistance to the slow propagation of cracks (stress cracking or ESCR)."

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It appears that the recited "creep resistance" property is a property of the shaped article made from the composition, and not that of the composition itself.

In view of Applicant's disclosure it is the Examiner's position that Applicant's improvement in the art lies in the use of the composition to make shaped articles, such as pipes, which exhibit creep resistance. Therefore, in view of the teachings of the prior art of record and that which is disclosed by Applicant, the Examiner has indicated that which is believed to patentably distinguish the presently claimed invention over the teachings of the prior art of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Dye whose telephone number is (703) 308-4331.

A handwritten signature in black ink, appearing to read 'Rena L. Dye', with a stylized flourish at the end.

Rena L. Dye
Primary Examiner
Tech Center 1700

R. Dye
April 27, 2001